

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 23 MAY 2005

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Applicant's or agent's file reference P12047-PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/KR2004/001077	International filing date(day/month/year) 10 MAY 2004 (10.05.2004)	Priority date (day/month/year) 09 MAY 2003 (09.05.2003)
International Patent Classification (IPC) or national classification and IPC IPC7 H04B 7/26		
Applicant SAMSUNG ELECTRONICS CO., LTD. et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 19 OCTOBER 2004 (19.10.2004)	Date of completion of this report 11 MAY 2005 (11.05.2005)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer SHIN, Jun Ho Telephone No. 82-42-481-8129 

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/001077

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☒ This report is based on translations from the original language into the following language English which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☒ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☒ the international application as originally filed/furnished

 - ☐ the description:
 - pages _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____

 - ☐ the claims:
 - pages _____ as originally filed/furnished
 - pages* _____ as amended (together with any statement) under Article 19
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____

 - ☐ the drawings:
 - pages _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____

 - ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 49	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	2-5, 7-42, 44-46, 48, 49	YES
	Claims	1, 6, 43, 47	NO
Industrial applicability (IA)	Claims	1 - 49	YES
	Claims	NONE	NO

2. Citations and explanations (Rule 70.7)

1. NOVELTY AND INVENTIVE STEP

Reference is made to the following documents:

- D1 : "Individual Backoff Time Allocation for Each Ranging Code Set"; IEEE C802.16a-01/57; May 2002.
- D2 : "A Priority Scheme for IEEE 802.11 DCF Access Method"; Deng, Chang; IEICE TRANS. COMMUN., VOL.E82-B, NO.1 pages 96-102; January 1999

Claim 1 discloses a method for performing a ranging operation by a subscriber station comprising the steps of : receiving, from a base station, backoff domains having a backoff start point and a backoff end point for each of ranging, determined according to priority levels of the ranging between the base station and subscriber stations ; performing a ranging operation with the base station, and selecting a backoff domain corresponding to a priority level of the performing ranging among the received backoff domains if the ranging fails; and, re-performing a ranging operation with the base station according to the selected backoff domain.

D1 describes a method for classifying a ranging procedure between a base station(BS) and a subscriber station(SS) into an initial ranging operation, a bandwidth request ranging operation, and a periodic ranging operation. The BS sends an Uplink message containing the backoff start and end value of each ranging operation to the SS(D1, page11). When the SS wants to enter a contention resolution process, it selects a number randomly within its backoff window to decide the transmission opportunity(D1, page 6).

(continued on Supplemental Box)

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

(Continuation of Box No. V)

The major differences between D1 and the invention of claim 1 are to determine the backoff domains according to the priority order of the ranging operation and to select backoff domains according to the priority order of the performed ranging operations. However, these differences are disclosed in D2 which describes a method for support priority in a wireless LAN. In D2, a random backoff time is divided into two parts (corresponding to "backoff domain according to the priority order" in claim 1); the high priority station uses one part and the low priority station uses the other part (D2, page 99 right hand, lines 7-26).

Although neither of D1 and D2 does not individually disclose all features of claim 1, it is obvious to a skilled person in a telecommunication system to derive the subject matter of claim 1 by combining D1 and D2. Therefore, claim 1 and the corresponding apparatus claim 43 are considered to lack an inventive step.

Claim 6 explains the same subject matter of claim 1 from a viewpoint of a BS. Therefore, claim 6 and the corresponding apparatus claim 47 are considered to lack an inventive step, either.

2. INDUSTRIAL APPLICABILITY

Claims 1-49 are considered to meet the requirement of PCT Article 33(4) in respect of an industrial applicability.